

ABSTRACT

Ice condensed in a portion in a case in which a cryogenic refrigerator is installed, which is cooled by the cryogenic refrigerator, is melted by increasing a temperature of the ice to a melting point of the ice or higher. Then, while the temperature of the melted ice and a pressure thereof are kept to be equal to or higher than a freezing point of water, the pressure is reduced by rough evacuation so as to vaporize water. At a time at which the water is discharged, the pressure is further reduced so as to discharge water vapor. In this manner, regeneration of water is performed in accordance with a state of the water (i.e., a solid state, a liquid state, and a gas state), thereby shortening a regeneration time.